UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Colonel Robert D. Peterson
District Engineer
Huntington District
U.S. Army Corps of Engineers
502 Eighth Street
Huntington, West Virginia 25701

JUN 21 2010

Dear Colonel Peterson:

The U.S. Environmental Protection Agency (EPA) has been participating in discussions with your staff and with representatives of Coal-Mac Inc. (applicant) to seek resolution of concerns expressed by EPA regarding the proposed Pine Creek Surface Mine. Pine Creek Surface Mine is one of the remaining sixteen projects located in West Virginia and identified for the enhanced coordination procedures (ECP) established in the Memorandum of Understanding (MOU) signed by our respective agencies and the Department of Interior on June 11, 2009. The 60-day ECP timeframe for resolution of issues surrounding this project began on April 6, 2010 and expired on June 4, 2010. EPA sent a letter requesting a 15 day extension for review of the project; that extension expires on June 19, 2010.

On April 1, 2010, EPA released interim final guidance to the Regional offices titled: *Guidance on Improving EPA Review of Appalachian Surface Coal Mining Operations under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order* (SCM Guidance). The SCM Guidance clarifies EPA's regulations as they apply to discharges associated with surface coal mining practices and provides a framework for the Regions when they review permits for discharges associated with Appalachian surface mining projects. EPA Region III utilized the regulations and this Guidance during its review of the Coal Mac proposal. EPA recently also released two Office of Research and Development (ORD) reports: *The Effects of Mountaintop Mines and Valley Fills on Aquatic Ecosystems of the Central Appalachian Coalfields,* and *A Field-Based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams (Benchmark Conductivity Study).* The ORD reports are being submitted to the EPA Science Advisory Board (SAB) for review and are also publicly available. In the interim, EPA views the reports as providing information, along with published, peer-reviewed scientific literature, that may inform permit reviews.

During the project review process as provided by the June 11, 2009 Memorandum to the Field, EPA identified four areas of general concern. These included avoidance and minimization, water quality impacts, cumulative effects, and mitigation. The project as proposed by Coal-Mac Inc. will impact 14,530 linear feet of stream channel and disturb 759 surface acres. The streams on-site are good quality and are providing clean, freshwater dilution to the Left Fork of Pine Creek. We commend Coal-Mac for its efforts to address EPA's concerns based on our

regulations and clarified by the SCM Guidance. EPA believes that a permit decision may move forward consistent with the application as modified by this letter.

Avoidance and Minimization

The applicant performed a comprehensive alternatives analysis as part of the original application. Through the applicant's upfront efforts impacts to 22% of the stream resources within the project area were avoided. The applicant proposes to haul approximately 4.1 million tons of material to the adjacent mine (Pheonix No. 4 Surface Mine). The applicant proposes to raise the deck of the valley fills 100 feet beyond that which is required by the West Virginia Approximate Original Contour/Fill Optimization process. Where practicable the applicant has maximized the amount of spoil returned to the mine bench and minimized the amount of excess spoil that must be disposed of in streams. Following the initiation of the ECP process, the applicant evaluated alternatives in valley fill construction and has incorporated best management practices that are expected to reduce the likelihood of increased loading of total dissolved solids (TDS) and specific conductivity levels to minimize water quality impacts and protect against significant degradation of downstream aquatic resources. These include a materials handling plan to minimize exposure of mineral-rich overburden to surface waters and groundwater, and modification of fill construction to maximize surface water runoff and minimize infiltration of water through the fill.

In addition, the applicant has modified the mine plan in an effort to minimize the amount of land disturbed at any one point in time during the operation. The original plan proposed to have the full mine area disturbed and all three valley fills active within 12-18 months of commencing operation. The revised mine plan proposes the concurrent use of Valley Fills 1 and 3 within approximately 6 months, but represents a reduction of surface acres of disturbance at any point in time during operation by up to 25% within one year of operation. The applicant's proposal would delay the use of Valley Fill 2 until approximately 3 years from the beginning of the operation. While the applicant's efforts in this regard are appreciated, the proposal essentially calls for concurrent construction of Valley Fills 1 and 3. As set forth in more detail below, EPA recommends that the three valley fills be constructed sequentially, with earlier valley fills fully constructed and monitored prior to initial construction of subsequent fills to ensure that predicted water quality outcomes are achieved.

Water Quality and Significant Degradation

To address the Agency's water quality concerns, the applicant has proposed to incorporate Best Management Practices recommended in the April 1 SCM Guidance. Based on peer-reviewed studies examining the relationship between conductivity and water quality impairment in Appalachia, EPA anticipates that projects with predicted conductivity levels below 300 µS/cm generally will not cause a water quality standard violation or significant degradation of the aquatic ecosystem. However, EPA expects that in-stream conductivity levels above 500 µS/cm are likely to be associated with adverse impacts that could rise to a level of significant degradation of the aquatic ecosystem. EPA has not been provided any information regarding site-specific conditions that differ from those studies. The Corps, EPA and the applicant have worked to develop protective permit conditions to ensure in-stream specific conductivity remains at levels that will not cause or contribute to degradation to water quality, including setting threshold limits within the permit of 300 µS/cm and 500 µS/cm, sequential construction of the

valley fills as described in the SCM Guidance document, a demonstration that specific conductivity at the monitoring locations remains on average below 500 µS/cm before the commencement of the next valley fill may begin.

To support this demonstration, a supplemental enhanced monitoring plan has been included with the project proposal as described in the applicant's Supplemental Monitoring and Adaptive Management Plan document. The applicant has agreed to monitor for physical, biological, and chemical parameters. The chemical parameters that will be monitored include, but are not limited to flow, pH, iron, manganese, aluminum, selenium, TDS, total suspended solids (TSS), sulfates, chlorides and specific conductivity.

The applicant proposes two conductivity thresholds for adaptive management. The first is at 300 µS/cm. If the linear trend in the twice-monthly monitoring data indicates an exceedance of 300 µS/cm below Valley Fill 1 and/or Valley Fill 3, the applicant will implement an adaptive management plan (AMP) to address the trend. The second threshold is at 500 µS/cm. The applicant proposes that, if a linear trend in twice-monthly monitoring indicates an exceedance of 500 µS/cm below Valley Fill 1, the applicant will provide additional mitigation focused on chemical improvements in the watershed. With respect to construction of Valley Fills 1 and 3, the applicant proposes to commence construction of Valley Fill 1 and to demonstrate that the average conductivity values downstream of Valley Fill 1 remain below 500 µS/cm within six months from construction of Pond 1 or after the construction of the first three lifts within Valley Fill 1, which ever period of time is longer. The applicant proposes that, if the foregoing condition is achieved, the applicant be authorized to proceed with construction of Valley Fill 3. If the foregoing condition is not achieved, the applicant proposes that it would not be authorized to proceed with construction of Valley Fill 3 until and unless successful remediation occurs. With respect to construction of Valley Fill 2, the applicant proposes to monitor both Valley Fills 1 and 3 during construction and demonstrate that average conductivity values downstream of both fills have remained below 500 µS/cm. If this condition is achieved, construction of Valley Fill 2 may proceed. Under this scenario, the applicant anticipates a period of three years between construction of Pond 1 and commencement of construction of Valley Fill 2. The applicant would not be allowed to proceed to Valley Fill 2 until and unless successful remediation occurs.

While the applicant's proposal attempts to address the Agency SCM Guidance, EPA remains concerned that the proposal essentially calls for concurrent construction of Valley Fills 1 and 3. The applicant has not demonstrated that the anticipated approximate 6 month period between construction of Pond 1 and commencement of construction at Valley Fill 3 is a sufficient monitoring period to meaningfully evaluate impacts from Valley Fill 1. For that reason, EPA recommends that each proposed valley fill be constructed to its completion and monitored over a period of time to evaluate whether significant degradation is occurring. This would allow for a comprehensive demonstration that Valley Fill 1 is consistent with the conductivity benchmark of 500 µS/cm included in the SCM Guidance and will not result in significant degradation in the receiving streams.Accordingly, EPA recommends that only Valley Fill 1 be authorized immediately using previously agreed-upon underdrain and landscape best management practices. Authorization of only Valley Fill 1 allows for time to assess the effects of removing the contribution of dilution waters with low conductivity to the Left Fork of Pine Creek where conductivity levels approach 500 µS/cm. The data from Valley Fill 1 should be utilized to determine whether to authorize remaining valley fills.

Mitigation

The applicant has proposed on-site stream restoration and creation of 40,000+ linear feet of stream (greater than 2:1 ratio). The plan includes a significant monitoring plan and benchmarks for success, an adaptive management plan that provides back up plans if the projects are unsuccessful and provides for upfront financial assurances. The applicant's benchmarks of success include biological, chemical and physical measures and are intended to replace the lost functions within the immediate watershed. The primary goal of these created stream channels is to become functioning stream channels that meet Clean Water Act requirements and meet the State's designated use for aquatic life. EPA believes the proposed mitigation is consistent with CWA regulations and the considerations provided in the April 1 SCM Guidance document.

Cumulative Impacts

To address cumulative impacts, the applicant has offered to deed restrict three areas previously permitted to be filled on the Phoenix No. 5 Surface Mine operation. The Phoenix No. 5 operation was authorized to construct 5 valley fills. Two valley fills have been constructed. The applicant will deed restrict the three remaining unfilled sites. Those areas will therefore not be subject to filling now or in the future. This is an avoidance of impacts to 3,900 linear feet of stream channel and represents a 39.5% reduction of impacts within the Pine Creek watershed. The average conductivity values for these three streams are below 350 µS/cm and West Virginia Stream Condition Index scores greater than 85, indicating a very good biological community. In addition, the applicant has proposed to provide mitigation concurrently with the mining operation focused on improving the water quality through the reduction of TDS in the immediate watershed. There currently exists 4 deep mine discharges that are contributing to the loading of TDS on Left Fork of Pine Creek, and on Pine Creek, that the applicant is evaluating and is proposing to address.

EPA believes that a permit decision may move forward consistent with the application as modified by the Supplemental Monitoring and Adaptive Management Plan and as further modified by this letter. Incorporation of these modifications into enforceable conditions is recommended. EPA requests that we have the opportunity to review and comment on the draft permit and special conditions prior to finalization.

EPA appreciates the work your staff and Coal-Mac Inc. have undertaken to address the Agency's concerns. We look forward to continuing coordination as the permit is finalized. If you have any questions please don't hesitate to contact me or Jeff Lapp of my staff at 215-814-2717.

Sincerely,

Tai-Ming Cheng

for John R. Pomponio, Director
Environmental Assessment and Innovation Division